Module 3: PHP and Web Server Configuration

This module provides an overview of PHP configurations, web server settings for Apache and Nginx, and basic troubleshooting methods for common web server issues.

---

1. Overview of PHP Versions and Configurations

CWP supports multiple PHP versions, allowing you to run applications with different PHP requirements on the same server.

- **PHP Versions**: CWP offers PHP versions from older stable versions to the latest releases (e.g., PHP 5.x, 7.x, 8.x).
- **Importance of PHP Configuration**:
    - Proper PHP configuration ensures optimized performance, compatibility, and security for web applications.
    - By selecting the appropriate PHP version per domain, you can maximize compatibility across various applications.
    - CWP Free version does not support multiple PHP versions. You may require a license so as to use PHP Selector which allows multiple versions.
- **Key PHP Settings in CWP**:
    - Memory limit, max execution time, upload limit, and other settings can be adjusted through the **PHP Configuration Editor** in CWP.
    - These settings can be tailored to meet application requirements or improve server performance.

---

2. Installing and Managing Multiple PHP Versions (Using PHP Selector)

CWP's PHP Selector allows you to install and manage multiple PHP versions, helping you cater to various applications with specific PHP requirements.

- **Accessing PHP Selector**:
  - In the CWP Admin Panel, navigate to **PHP Selector** under **PHP Settings**.
- **Installing Additional PHP Versions**:
  - Select the PHP version to install, and click on **Install**. CWP will handle the download and setup.
  - Once installed, the PHP version will be available for selection on a per-domain basis.
- **Assigning PHP Versions to Domains**:
  - In **Domain Management** or **User Panel**, assign a specific PHP version to each domain.
  - This feature ensures that applications with unique PHP needs can run without conflicts.
- **Configuring PHP Settings for Each Version**:
  - Access the **PHP Configuration Editor** for each PHP version to customize settings like memory limits, post and upload size limits, and other key configurations.

Watch video

https://www.youtube.com/watch?v=SMbNIYdNTuk

---

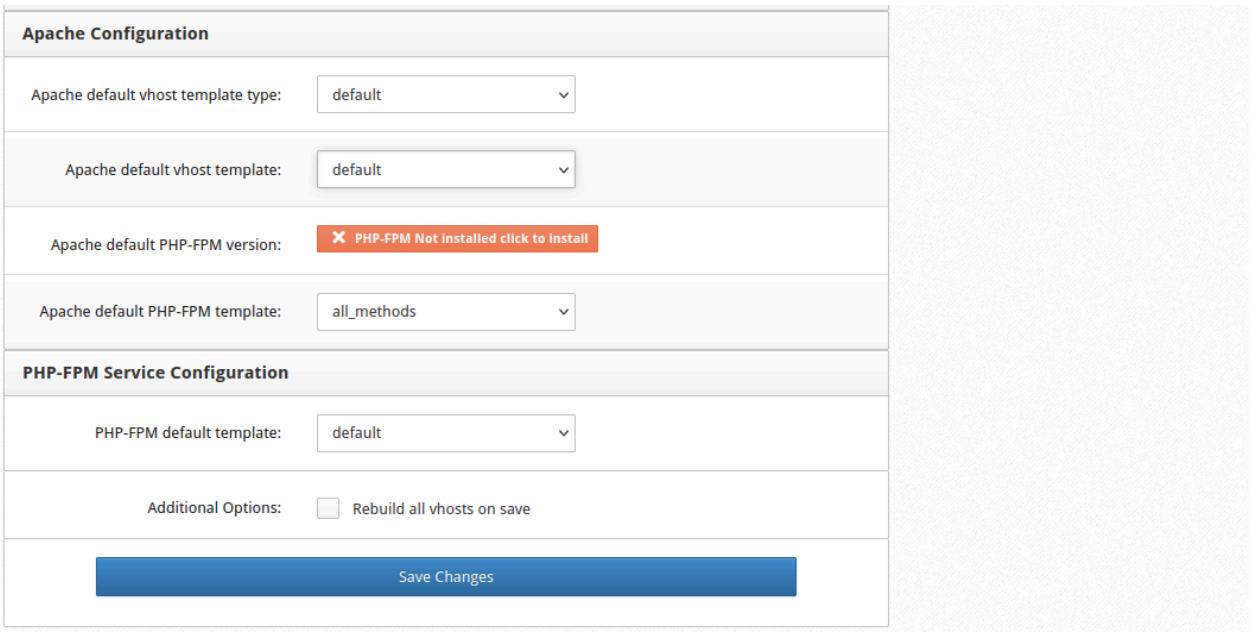
3. Configuring Apache and Nginx Web Server Settings

CWP supports Apache as the primary web server and optionally uses Nginx as a reverse proxy for improved performance.

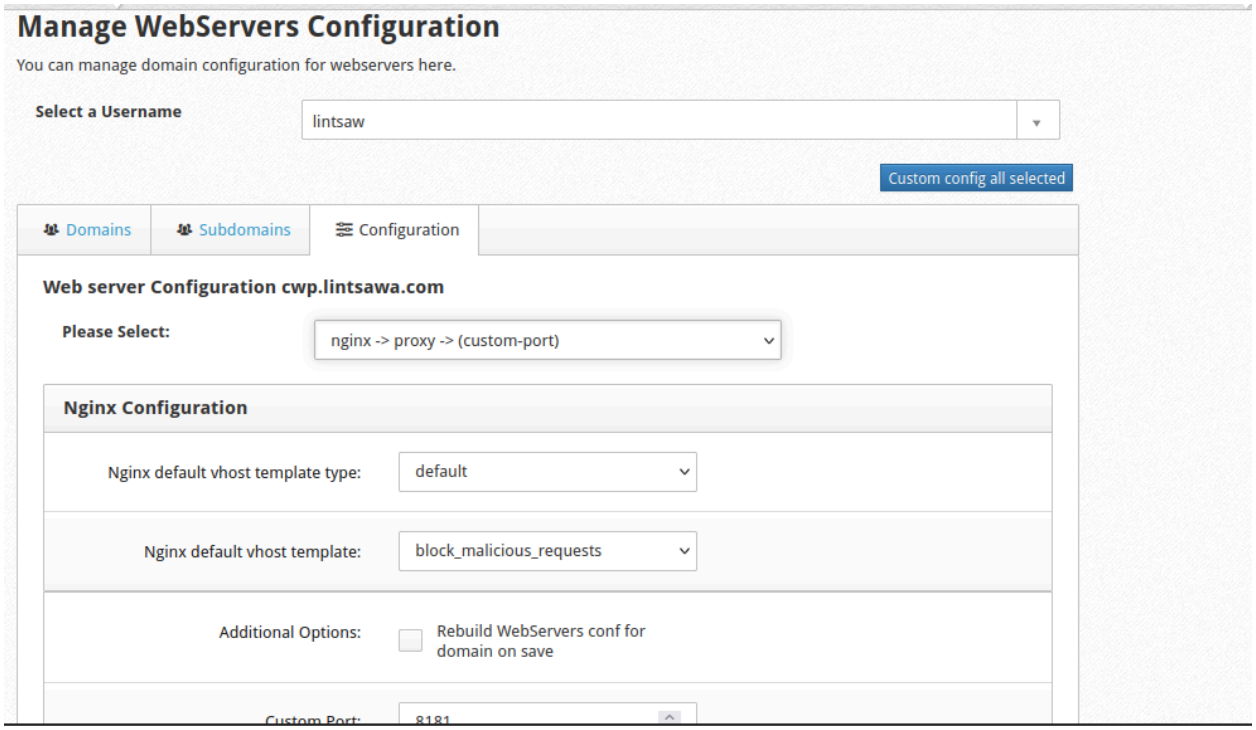
Apache Configuration:

- **Basic Settings**:

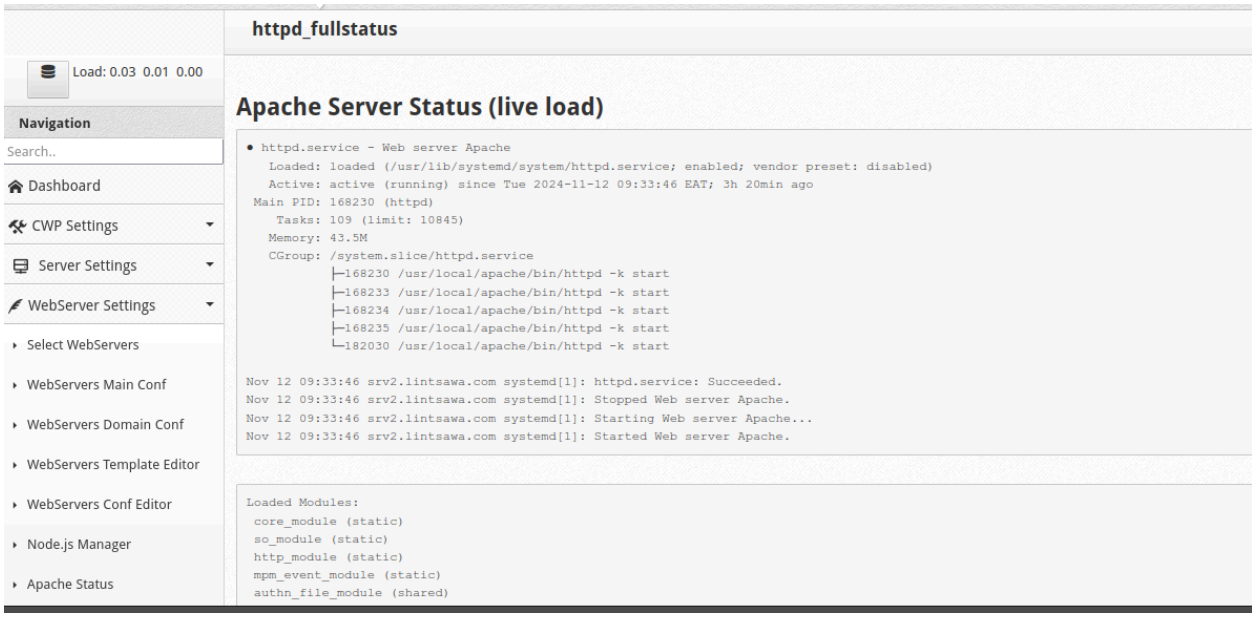
- Adjust settings in the **Apache Settings** section of the Admin Panel, where you can configure modules, handlers, and directives.



- **Virtual Hosts**:
  - Each domain or subdomain runs as a separate virtual host. You can adjust settings for each host in **Apache Configuration Files**.



- **SSL Certificates**:
  - Manage SSL certificates for domains through **SSL Certificates** in CWP for secure HTTPS connections.

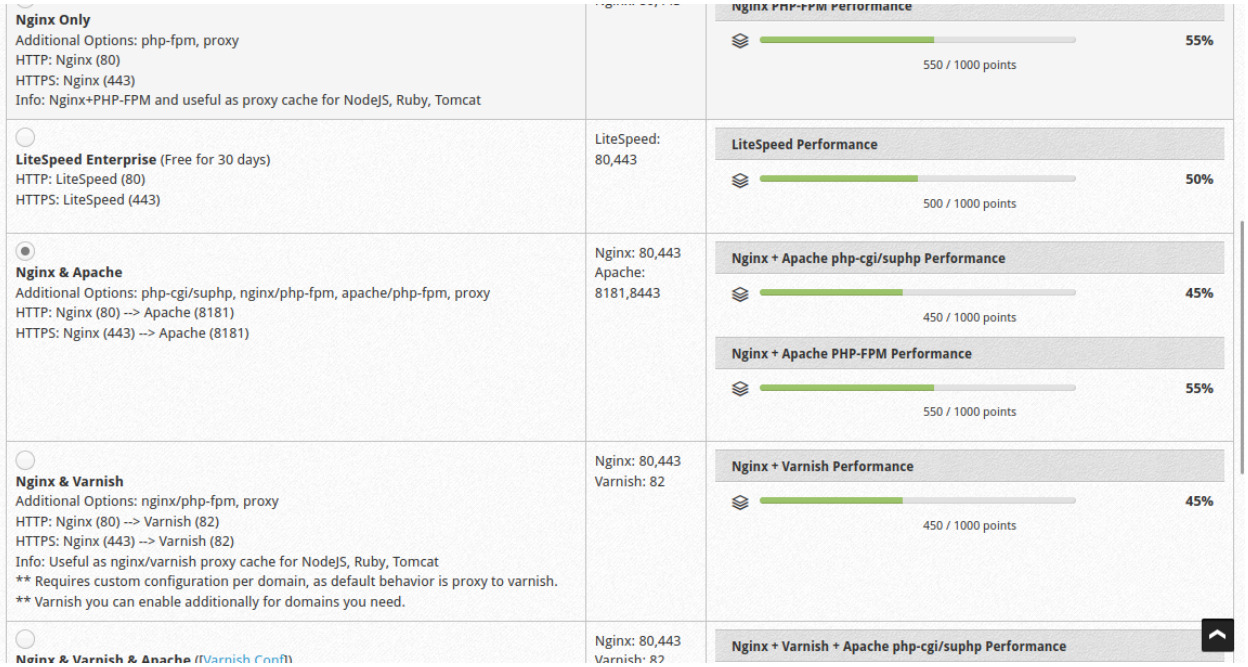


Nginx Configuration:

- **Nginx as a Reverse Proxy**:
    - When enabled, Nginx handles static content while Apache serves dynamic content, enhancing load speed.
    - Configure Nginx in **Nginx Settings** in CWP Admin Panel.
- **Caching**:
    - Enable caching for Nginx to reduce server load, particularly for static resources.

Switching Between Web Servers:

- CWP allows you to switch from Apache to Nginx & Apache in combination or from Apache to Nginx only, giving flexibility based on your server requirements.



---

4. Basic Troubleshooting of Web Server Issues

Effective troubleshooting is crucial for maintaining uptime and performance. Here are some common issues and solutions for web server problems in CWP.

Common Issues and Resolutions:

- **Web Page Not Loading (502/503 Errors)**:
  - Restart Apache/Nginx services using the **Restart Services** option in the CWP Admin Panel.
  - Check error logs for any misconfigurations or issues in the web server files.
  - Restart CPW Service using **sh /scripts/restart_cwpsrv**
- **PHP Errors**:
  - If a site is showing PHP-related errors, ensure the correct PHP version is assigned to the domain.
  - Review PHP error logs for details and solutions.
- **SSL Errors**:
  - Ensure that SSL certificates are correctly installed for each domain.
  - Use the **SSL Certificate Manager** to reissue or renew certificates if necessary.
- **High Resource Usage**:
  - Use **Server Monitoring** via SSH to check CPU, memory, and disk usage.
  - Identify resource-heavy applications and consider optimizing or caching to reduce load.
- **Permission Issues**:
  - Ensure files and directories have correct ownership and permissions, especially for web root folders (e.g., **`/home/username/public_html`).**
  - Adjust permissions using the **File Manager** or through FTP/SFTP.